

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for producing a silicon carbide single crystal, comprising the steps of:

providing a graphite-made growth crucible with a low-temperature section and a high-temperature section;

placing a seed crystal substrate formed of silicon carbide single crystal in the low-temperature section of the growth crucible;

placing a silicon carbide raw material in the high-temperature section of the growth crucible; and

depositing a gas sublimated from the silicon carbide raw material onto the seed crystal substrate to thereby grow a silicon carbide single crystal,

further comprising the steps of:

using an outer crucible to surround the growth crucible, with a space left therebetween;

continuously feeding a silicon raw material in solid form from outside into the space; and

evaporating the silicon raw material in the space to thereby form a silicon gas serving as the atmosphere gas surrounding the growth crucible

wherein the silicon carbide single crystal is grown with an atmosphere gas that surrounds the growth crucible containing a silicon gas and with vapor pressure of the silicon gas that surrounds the growth crucible continuously maintained to be higher than that of the silicon gas in

the gas sublimated from the silicon carbide raw material in the growth crucible and with vapor pressure of silicon gas ~~that~~ in the growth crucible maintained substantially equal to or higher than equilibrium vapor pressure of the silicon gas contained in the sublimated gas.

2 to 5. (canceled).

6. (currently amended): The method for producing a silicon carbide single crystal according to claim 15, wherein the silicon raw material in solid form is in a form of powder constituted by particles having a diameter of 0.2 to 5 mm.

7. (currently amended): The method for producing a silicon carbide single crystal according claim 13, wherein the silicon raw material is fed at a rate of 0.5 to 20 mg/second.

8. (currently amended): The method for producing a silicon carbide single crystal according to claim 13, wherein a position within the space to which the silicon raw material is fed has a temperature regulated to at least 1,900°C.

9. (currently amended): The method for producing a silicon carbide single crystal according to claim 13, wherein the atmosphere gas surrounding the growth crucible has a pressure regulated to 1.33×10^2 to 4.0×10^4 Pa.

10. (previously presented): The method for producing a silicon carbide single crystal according to claim 9, wherein the atmosphere gas surrounding the growth crucible has a pressure regulated to 6.65×10^3 to 2.0×10^4 Pa.

11. (previously presented): The method for producing a silicon carbide single crystal according to claim 9, wherein a growth rate of the silicon carbide single crystal is 1 mm/hour or more.

12. (previously presented): A silicon carbide single crystal produced by the method according to claim 1, wherein the silicon carbide single crystal exhibits a micropipe density of 10,000 micropipes/cm² or less.

13. (currently amended): An apparatus for producing a silicon carbide single crystal, comprising:

a graphite-made growth crucible having a low-temperature section and a high-temperature section;

a seed crystal substrate formed of silicon carbide single crystal and placed in the low-temperature section;

a silicon carbide raw material placed in the high-temperature section,

an outer crucible disposed to surround the growth crucible, with a space left therebetween, and
means for continuously feeding a silicon raw material in solid form from outside into the space,

whereby the silicon carbide single crystal is grown with an atmosphere gas that surrounds the growth crucible containing a silicon gas and with vapor pressure of the silicon gas that surrounds the growth crucible continuously maintained to be higher than that of the silicon gas in the gas sublimated from the silicon carbide raw material in the growth crucible and with vapor

pressure of silicon gas ~~that~~ in the growth crucible maintained substantially equal to or higher than equilibrium vapor pressure of the silicon gas contained in the sublimated gas.

14. (canceled).

15. (previously presented): The apparatus for producing a silicon carbide single crystal according to claim 13, wherein the growth crucible has a lid and is provided therein with a supporter having a lower surface to which the seed crystal substrate is to be attached, with a space left between an upper surface of the supporter and the lid of the growth crucible.

16. (canceled).

17. (currently amended): The apparatus for producing a silicon carbide single crystal according to claim ~~16~~13, wherein the feeding means is a metered feeding apparatus for feeding a solid silicon raw material at a rate of 0.5 to 20 mg/second.

18. (currently amended): The apparatus for producing a silicon carbide single crystal according to ~~claim 16 or~~ claim 17, wherein the growth crucible has a lid and is provided therein with a supporter having a lower surface to which the seed crystal substrate is to be attached, with a space left between an upper surface of the supporter and the lid of the growth crucible.